

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A method of protecting a local area of
~~removing a coating from~~ a gas turbine component from the effect of a
thermomechanical or mechanical processes carried out on a surface of the
component, the method comprising the steps of

applying a masking material to a local area or to local areas on the gas turbine component, said masking material containing at least one filler material and a
substance which fluoresces under ultraviolet light,

at least partially thickening the masking material having the at least one filler material and the substance which fluoresces under ultraviolet light,

~~removing the coating from the gas turbine component using a~~ carrying out the
thermochemical or a mechanical process; ~~and~~

removing the masking material from the local area or the local areas, and
carrying out an inspection using ultraviolet light to locate any unwanted
residual masking material on the surface of the component and removing the
unwanted residual masking material from the surface by mechanical means,

wherein the filler particle diameter size is on average, or contains mixtures
with average diameters, ranging from 10 μm to 150 μm .

2. (Previously Presented) The method according to claim 1, wherein the local area to be protected is a braze joint, a cooling hole, or a local part of a coated area.

3. (Canceled)

4. (Previously Presented) The method according to claim 1, wherein the masking material is applied from an external surface or from an internal cavity of the component.

5. (Previously Presented) The method according to claim 1, wherein the masking material is thickened by the use of an energy source, whereby energy impinges from the outside or from an internal cavity of the component.

6. (Previously Presented) The method according to claim 1, wherein after applying the masking material the surface of the component is cleaned by mechanical means to remove any unwanted residual masking material .

Claims 7 and 8 (Canceled)

9. (Currently Amended) The method according to claim 8 1, wherein after removing unwanted residual masking material, a re-inspection is carried out using ultraviolet light to locate any further unwanted residual masking material .

10. (Currently Amended) The method according to claim 8 1, wherein after removing unwanted residual masking material, masking material is reapplied to the local area.

11. (Previously Presented) The method according to claim 1, wherein the thermochemical or mechanical process is one or a combination of a chemical etching method, acid or alkaline stripping, water jet stripping, grit blasting, high speed grit blasting or another abrasive technique.

12. (Previously Presented) The method according to claim 1, wherein the component is heated before or during the method to facilitate the application and/or thickening of at least a portion of the masking material .

13. (Previously Presented) The method according to claim 1, wherein the masking material is applied in a step wise fashion in which it is at least partially thickened before applying the next amount.

14. (Previously Presented) The method of claim 13, wherein the amount of filler is changed from layer to layer of masking material.

15. (Previously Presented) The method of claim 14, wherein the masking material of the last layer contains 30 – 80 vol.-% filler material with a grain size of 40 – 150 μm to a depth not less than 1 mm.

16. (Previously Presented) The method according to claim 1, wherein the fillers added to the masking material include particles or fibres of metal, oxide material or organic materials.

17. (Original) The method of claim 16, wherein the filler content is in the range of 10 – 90 vol.-%.

18. (Original) The method of claim 17, wherein the filler content is in the range of 20 – 60 vol.-%.

19. (Previously Presented) The method according to claim 1, wherein the filler particle diameter size is on average, or contains mixtures with average diameters, ranging from 1 μm to 500 μm .

20. (Cancel)

21. (Currently Amended) The method according to claim ~~20~~ 1, wherein the filler particle diameter size is on average, or contains mixtures with average diameters, ranging from 40 μm to 100 μm .

22. (Previously Presented) The method according to claim 1, wherein the removal of the thickened masking material from the local area is done by burning it out and a final removal of any residual masking material from the local areas is completed by water jet machining or by an ultrasonic cleaning treatment.

23. (Previously Presented) The method according to claim 22, wherein the local area is a cooling hole and the step of the removal of masking material in cooling holes is done by locating the cooling holes using a vision system which directs a computer numerically controlled machine.

24. (Previously Presented) The method according to claim 1, wherein the masking material is a photopolymerizing resin or a mixture of resins and photoinitiator which polymerize with exposure to ultraviolet light.

25. (Previously Presented) The method according to claim 1, wherein the masking material is a UV polymerizing plastic.

26. (Previously Presented) The method according to of claim 25, wherein thickened masking material containing the filler material is heated or processed so as to volatilize or otherwise remove the volatile, not polymerized organic portion of the masking material before the thermochemical or mechanical process on the surface of the component is carried out.

27. (Previously Presented) The method according to claim 25, wherein the masking material includes binding agents which are effective in holding together the solid particles or fibres of the filler material after the organic portion of the masking material is removed.

28. (Previously Presented) The method according to claim 1, wherein the masking material is thickened by an electromagnetic energy source or a collimated light energy source.

29. (Previously Presented) The method according to claim 28, wherein the electromagnetic energy source is visible, ultraviolet or infra-red light.

30. (Previously Presented) The method according to claim 28, wherein the collimated light energy source is a laser.

31. (Previously Presented) The method according to claim 1, wherein the local area to be protected is an area of a gas turbine component which is sensitive to the thermochemical and/or mechanical process.

32. (Previously Presented) The method according to claim 16, wherein oxide material includes silica, magnesia, calcia, alumina, zirconia, yttria or a mixture thereof.

33. (Previously Presented) The method according to claim 25, wherein the UV polymerizing plastic is a polyurethane, a polyurethane oligomer mixture, 2-Hydroxyl Methacrylate, Isobornyl Acrylate, Maleic acid, methyl methacrylate, butyl acrylate copolymer, acrylic acid, T-Butyl Perbenzoate, poly(isobutyl methacrylate), poly(vinyl toluene), polypropylene or a polypropylene / polyurethane oligomer mixture, the class of polymers vetones or silicones, or any mixture thereof.